

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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		)	
Appln. No.	: 10/590,698	)	Examiner: J. R. Bellinger
		)	
Filed	: August 25, 2006	)	Confirmation No.: 4508
		)	
For	: SEALING RING FOR A VEHICLE WHEEL		

## APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Commissioner for Patents  
U.S. Patent and Trademark Office  
Customer Window, Mail Stop Appeal Brief-Patents  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Sir:

This appeal is from the Examiner's final rejection of claims 13-37 as set forth in the Final Office Action of April 2, 2009. A Notice of Appeal and extension of time, in response to the April 2, 2009 Final Office Action, was filed on September 2, 2009.

A check in the amount of \$540.00 is being concurrently submitted as payment of the requisite fee under 37 C.F.R. 41.20(b)(2). No additional fee is believed to be required for filing the instant Appeal Brief. However, if for any reason a necessary fee is required for consideration of the instant paper, authorization is hereby given to charge the fee for the Appeal Brief and any necessary extension of time fees to Deposit Account No. 19-0089.

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**(I) REAL PARTY IN INTEREST**

The real party in interest is Continental Aktiengesellschaft, as evidenced by an Assignment recorded with the USPTO on August 25, 2006 at reel 018244 and frame 0411.

**(II) RELATED APPEALS AND INTERFERENCES**

No related appeals and/or interferences are pending.

**(III) STATUS OF THE CLAIMS**

Claims 13-37 are pending. Claims 1-12 are canceled. Claims 13-37 stand finally rejected. Claims 13-37 are at issue and form the subject of this appeal. The claims in issue are attached in the "Claims Appendix".

**(IV) STATUS OF THE AMENDMENTS**

A Response under 37 C.F.R. § 1.116 was filed on July 2, 2009 following the Final Office Action. An Advisory Action dated July 28, 2009 indicated that the Rule 1.116 Response was entered and considered, but did not place the application in condition for allowance. The Advisory Action also indicated that the objections to the specification and drawings, as well as, the Section 112, 1<sup>st</sup> paragraph, rejection are withdrawn and that claims 25 and 29-37 are allowable and would be allowed if amended to overcome the Section 112, 2<sup>nd</sup> paragraph, rejection. However, the Advisory Action was silent regarding the Section 132 Objection. A Notice of Appeal and extension of time was filed on September 2, 2009. Thus, no amendments after final have been filed; however, all amendments to the claims have been entered.

**(V) SUMMARY OF THE CLAIMED SUBJECT MATTER**

A. The Claimed Subject Matter

### 1. INDEPENDENT CLAIM 13

With reference to page 11, line 22 to page 26, line 30 of the instant application and to e.g. Figs.1-6, and by way of non-limiting example, the invention provides for a sealing ring (8) for a vehicle wheel having a tubeless pneumatic tire (1) with two tire beads (6,7) formed on a radially inner side and by which the tubeless pneumatic tire (1) is mounted on a radial outer side of a multiple part rim (2). See page 11, line 31 to page 12, line 12 of the instant specification. The sealing ring (8) seals the pneumatic tire (1) radially inward toward the rim (2). See page 16, line 29 to page 17, line 19 of the instant specification. The sealing ring (8) is arranged on the radial outer side of the rim (2), extends over a circumference of the rim (2) in a circumferential direction and extends between the two tire beads (6,7) of the pneumatic tire (1) in the axial direction. See page 15, line 33 to page 16, line 27 of the instant specification. The sealing ring (8) is configured with a central annular body (30) comprising a cylindrical inner face for seating on a rim outer face and is configured with a concentric flexible annular limb (31, 32) on both axial sides of the central annular body (30). See page 12, line 22 to page 13, line 4 of the instant specification. Each annular limb (31, 32) extends obliquely radially outward in an axial direction from the central annular body (30). See page 12, line 22 to page 13, line 9 of the instant specification. Deformable sealing elements (33-36) are formed at an end of the annular limb (31, 32) which points away from the central annular body (30). See Fig. 2 and page 14, lines 10-26 of the instant specification. When the sealing ring (8) is in an un-installed state (Fig. 2), the deformable sealing elements (33-36) are arranged on and project from a radially inwardly pointing surface of each annular limb (31, 32) so as to extend over a circumference of the annular limb (31, 32). See page 12, line 22 to page 14, line 26 of the instant specification.

## 2. INDEPENDENT CLAIM 30

With reference to page 11, line 22 to page 26, line 30 of the instant application and to e.g. Figs.1-6, and by way of non-limiting example, the invention provides for a sealing ring (8) for a vehicle wheel having a tubeless pneumatic tire (1) with two tire beads (6, 7) formed on its radially inner side and by which the tubeless pneumatic tire (1) is mounted on a radial outer side of a multiple part rim (2). See page 11, line 31 to page 12, line 12 of the instant specification. The sealing ring (8), in an un-installed state (Fig. 2), includes a central annular body (30) comprising a cylindrical inner face for seating on a rim outer face. A first flexible member (31) is arranged on a first side of the central annular body (30). See page 12, line 22 to page 13, line 4 of the instant specification. The first flexible member (31) has an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See page 12, line 22 to page 13, line 9 of the instant specification. First deformable sealing elements (33-36) are formed on the first flexible member (31) and project from the inner surface toward the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See Fig. 2 and page 14, lines 10-26 of the instant specification. A second flexible member (32) is arranged on a second side of the central annular body (30). The second flexible member (32) has an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See page 12, line 22 to page 13, line 9 of the instant specification. Second deformable sealing elements (33-36) are formed on the second flexible member (32) and project from the inner surface toward the rim outer surface when the sealing ring is installed on the vehicle wheel. See Fig. 2 and page 14, lines 10-26 of the instant specification. Free ends of the first

deformable sealing elements (33-36) define different diameters on the first side and free ends of the second deformable sealing elements define different diameters on the second side. See Fig. 2 and page 12, line 22 to page 14, line 26 of the instant specification.

### 3. INDEPENDENT CLAIM 37

With reference to page 11, line 22 to page 26, line 30 of the instant application and to e.g. Figs.1-6, and by way of non-limiting example, the invention provides for a sealing ring (8) for a vehicle wheel having a tubeless pneumatic tire (1) with two tire beads (6,7) formed on its radially inner side and by which the tubeless pneumatic tire (1) is mounted on a radial outer side of a multiple part rim (2). See page 11, line 31 to page 12, line 12 of the instant specification. The sealing ring (8), in an un-installed state (Fig. 2), includes a central annular body (30) comprising a cylindrical inner face for seating on a rim outer face. A first flexible member (31) is arranged on a first side of the central annular body (30). See page 12, line 22 to page 13, line 4 of the instant specification. The first flexible member (31) has an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. First deformable sealing elements (33-36) are formed on the first flexible member (31) and project from the inner surface toward the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See Fig. 2 and page 14, lines 10-26 of the instant specification. A second flexible member (32) is arranged on a second side of the central annular body (30). The second flexible member (32) has an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See page 12, line 22 to page 13, line 9 of the instant specification. Second deformable sealing elements (33-36) are formed on the second

flexible member (32) and project from the inner surface toward the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See Fig. 2 and page 14, lines 10-26 of the instant specification. A circumferential thickness (m) of the first flexible member (31) is greater (m+p) in a portion (q) of the first flexible member (31) having the first deformable sealing elements (33-36) than at a portion of the first flexible member (31) arranged adjacent the central annular body (30). See Fig. 2. A circumferential thickness (m) of the second flexible member (32) is greater (m+p) in a portion (q) of the second flexible member (32) having the second deformable sealing elements (33-36) than at a portion of the second flexible member (32) arranged adjacent the central annular body (30). Free ends of the first deformable sealing elements (33-36) define different diameters on the first side and free ends of the second deformable sealing elements (33-36) define different diameters on the second side. See Fig. 2. The first and second deformable sealing elements (33-36) are separated by grooves whose bottoms define different diameters on each of the first and second sides. See Fig. 2 and page 12, line 22 to page 14, line 26 of the instant specification.

#### **(VI) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

**The Amendment filed January 2, 2009 was objected to under 35 U.S.C. § 132(a) as introducing new matter.**

**Claims 13-37 are rejected under 35 U.S.C. § 112, 2<sup>nd</sup> Paragraph, as being indefinite.**

**Claims 13-17, 22, 23 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 787,784 (GB '784) in view of DE 1,021,738 (DE '738).**

**Claims 18, 19, 21 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 787,784 (GB '784) in view of DE 1,021,738 (DE '738), and further in view of US Patent No. 7,104,300 to VEUX et al.**

**Claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 787,784 (GB '784) in view of DE 1,021,738 (DE '738) and US Patent No. 7,104,300 to VEUX et**

al., and further in view of US Patent No. 1,621,021 to MEDYNSKI.

**(VII-A) ARGUMENT RE. 132 OBJECTION**

**THE SECTION 132 NEW MATTER OBJECTION IS IMPROPER**

Appellant notes that the Advisory Action dated July 28, 2009 did not indicate that the Section 132 Objection was withdrawn. Appellant suspects that this is the case as the Examiner has withdrawn the Section 112, 1<sup>st</sup> paragraph, rejection.

To the extent that the Examiner intends to maintain this new matter objection, Appellant incorporates herein the arguments presented in the Rule 1.116 in reference to the Section 112, 1<sup>st</sup> paragraph, rejection and notes that Fig. 2 clearly provides full and clear support for the new claims and specification changes presented in the Rule 1.111 Amendment. It is noted that the drawings, and in particular Fig. 2, form part of the original disclosure and provide full and clear support for the features alleged to be new matter.

To the extent that the Examiner believes that each claim feature is required to have full and express support in the description as implied in the Interview, Appellant reminds the Examiner that “the failure of the specification to specifically mention a limitation that later appears in the claims is not a fatal one when one skilled in the art would recognize upon reading the specification that the new language reflects what the specification shows has been invented.” See *All Dental Prodx, LLC v. Advantage Dental Products, Inc.*, 309 F.3d 774 (Fed. Cir. 2002) noting *Eiselstein v. Frank*, 52 F.3d 1035, 1039, 34 USPQ2d 1467, 1470 (Fed. Cir. 1995). A copy of the *All Dental Prodx* was previously made of record.

Appellant also directs the Examiner’s attention to the non-precedential decision in *Ex parte*



*DUNIFON et al.* which specifically explains, on page 2, that the drawings (in this case Fig. 2 of the instant application) can be relied upon to provide support for claim features shown therein.

Thus, it is submitted that one having ordinary skill in the art would readily recognize from at least Fig. 2 all of the features of the claimed invention in view of the disclosure of the instant application.

Appellant also notes that, although objections are normally not appealable, a Section 132(a) new matter objection is believed to be appealable. See, e.g., *Ex parte PERLOV et al* (2008-006158) which explains on page 12 that “[w]hen the issue of new matter presented is the subject of both an objection and a rejection, the issue is appealable.” It is noted that the Final Rejection asserted both a new matter rejection and new matter objection.

#### **(VII-B) ARGUMENT RE. 112, 2<sup>nd</sup> PARAGRAPH, REJECTION**

##### **REJECTION OF INDEPENDENT CLAIM 13 UNDER 35 U.S.C. § 112 IS IN ERROR**

The rejection of claim 13 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 13 was asserted to be indefinite because it recites

deformable sealing elements formed at an end of the annular limb which points away from the central annular body,  
wherein, when the sealing ring is in an un-installed state, the deformable sealing elements are arranged on and project from a radially inwardly pointing surface of each annular limb so as to extend over a circumference of the annular limb.

Appellant respectfully disagrees. According to MPEP §2173.02, the test for definiteness under 35 U.S.C. 112, second paragraph, is whether “those skilled in the art would understand what is

claimed when the claim is read in light of the disclosure." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986). Definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) the content of the particular application disclosure; (B) the teachings of the prior art; and (C) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. Moreover, the failure to provide explicit antecedent basis for terms does not always render a claim indefinite. If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite. *Energizer Holdings Inc. v. Int'l Trade Comm'n*, 435 F.3d 1366, 77 USPQ2d 1625 (Fed. Cir. 2006). MPEP §2173.05(e).

Appellant submits that each claim feature noted above is shown and described in Appellant's disclosure, that the Examiner has not demonstrated otherwise, and that the Examiner has not interpreted the claims in light of the description. As such, it is submitted that a *prima facie* case of indefiniteness has not been properly set forth.

Appellant notes that Fig. 2 of the instant application clearly shows deformable sealing elements 33-36 which are formed at an end of each annular limb 31 and 32. Each annular limb 31 and 32 also points away from the central annular body 30.

Fig. 2 also shows the sealing ring in an un-installed state. Fig. 2 further shows the deformable sealing elements 33-36 being arranged on and projecting from a radially inwardly pointing surface (the surface having angle  $\delta$ ) of each annular limb 31 and 32 so as to extend over a circumference (each sealing element 33-36 shown in Fig. 2 is oriented circumferentially and at angle  $\delta$ ) of the annular limb 31 and 32.

Thus, it is submitted that when read in the context of the claim and specification, and from the stand point of one having ordinary skill in the art, claim 13 is not indefinite.

**REJECTION OF INDEPENDENT CLAIM 30 UNDER 35 U.S.C. § 112 IS IN ERROR**

The rejection of claim 30 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 30 was asserted to be indefinite because it recites

a first flexible member arranged on a first side of the central annular body, the first flexible member having an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring is installed on the vehicle wheel;

first deformable sealing elements formed on the first flexible member and projecting from the inner surface toward the rim outer surface when the sealing ring is installed on the vehicle wheel;

a second flexible member arranged on a second side of the central annular body, the second flexible member having an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring is installed on the vehicle wheel;

second deformable sealing elements formed on the second flexible member and projecting from the inner surface toward the rim outer surface when the sealing ring is installed on the vehicle wheel.

Appellant notes that Fig. 2 of the instant application clearly shows a first flexible member (31) arranged on a first side of the central annular body (30). See page 12, line 22 to page 13, line 4 of the instant specification. The first flexible member (31) has an inner surface (the surface having angle  $\delta$ ) which extends to the cylindrical inner face (the inner cylindrical surface of center section 30) and which faces the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See page 12, line 22 to page 13, line 9 of the instant specification. The first deformable sealing elements (33-36) are formed on the first flexible member (31) and project (by distance p in Fig. 2) from the inner surface (the surface having angle  $\delta$ ) toward the rim outer surface when the sealing ring (8) is

installed on the vehicle wheel. A second flexible member (32) is arranged on a second side of the central annular body (30). The second flexible member (32) has an inner surface (the surface having angle  $\delta$ ) which extends to the cylindrical inner face (the inner cylindrical surface of center section 30) and which faces the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See page 12, line 22 to page 13, line 9 of the instant specification. Second deformable sealing elements (33-36) are formed on the second flexible member (32) and project (by distance  $p$  in Fig. 2) from the inner surface (the surface having angle  $\delta$ ) toward the rim outer surface when the sealing ring (8) is installed on the vehicle wheel.

Thus, it is submitted that when read in the context of the claim and specification, and from the stand point of one having ordinary skill in the art, claim 30 is not indefinite.

**REJECTION OF INDEPENDENT CLAIM 37 UNDER 35 U.S.C. § 112 IS IN ERROR**

The rejection of claim 37 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 37 was asserted to be indefinite because it recites

a first flexible member arranged on a first side of the central annular body, the first flexible member having an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring is installed on the vehicle wheel;

first deformable sealing elements formed on the first flexible member and projecting from the inner surface toward the rim outer surface when the sealing ring is installed on the vehicle wheel;

a second flexible member arranged on a second side of the central annular body, the second flexible member having an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring is installed on the vehicle wheel;

second deformable sealing elements formed on the second flexible member and projecting from the inner surface toward the rim outer surface when the sealing ring is installed on the vehicle wheel.

Appellant notes that Fig. 2 of the instant application clearly shows a first flexible member (31) is arranged on a first side of the central annular body (30). See Fig. 2 and page 12, line 22 to page 13, line 4 of the instant specification. The first flexible member (31) has an inner surface which extends to the cylindrical inner face (the inner cylindrical surface of center section 30) and which faces the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. First deformable sealing elements (33-36) are formed on the first flexible member (31) and project (by distance  $p$  in Fig. 2) from the inner surface (the surface having angle  $\delta$ ) toward the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See also page 14, lines 10-26 of the instant specification. A second flexible member (32) is arranged on a second side of the central annular body (30). The second flexible member (32) has an inner surface (the surface having angle  $\delta$ ) which extends to the cylindrical inner face (the inner cylindrical surface of center section 30) and which faces the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See also page 12, line 22 to page 13, line 9 of the instant specification. Second deformable sealing elements (33-36) are formed on the second flexible member (32) and project (by distance  $p$  in Fig. 2) from the inner surface (the surface having angle  $\delta$ ) toward the rim outer surface when the sealing ring (8) is installed on the vehicle wheel. See Fig. 2 and page 14, lines 10-26 of the instant specification.

Thus, it is submitted that when read in the context of the claim and specification, and from the stand point of one having ordinary skill in the art, claim 37 is not indefinite.

**REJECTION OF INDEPENDENT CLAIM 14 UNDER 35 U.S.C. § 112 IS IN ERROR**

The rejection of claim 14 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, is in error, the decision of the

Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 14 was asserted to be indefinite because it recites

the deformable sealing elements are configured radially outside the central annular body and project by a same amount from the radially inwardly pointing surface of the annular limb.

Appellant respectfully disagrees. Appellant notes that Fig. 2 clearly shows that the deformable sealing elements 33-36 project from the surface having angle  $\delta$ , i.e., the radially inwardly pointing surface, by the same amount (p), i.e., each element 33-36 projects away from the angled surface by the same amount. See also page 14, lines 10-26 of the instant specification.

Thus, it is submitted that when read in the context of the specification and drawings, and from the stand point of one having ordinary skill in the art, claim 14 is not indefinite.

#### **(VII-C) ARGUMENT RE. 103(a) REJECTIONS**

**The Rejection of claims 13-17, 22, 23 and 26 under 35 U.S.C. § 103(a) as being unpatentable over GB 787,784 (GB '784) in view of DE 1,021,738 (DE '738).**

##### **REJECTION OF INDEPENDENT CLAIM 13 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 13 under 35 U.S.C. § 103(a) as unpatentable over GB 787,784 (GB '784) in view of DE 1 021 738 (DE '738) is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

In the rejection, the Examiner asserted that a fair combination of the teachings of GB '784 and DE '738 disclosed or suggested all the recited features of claim 13, including the recited deformable sealing elements. Appellant respectfully traverses this rejection.

Appellant respectfully submits that this rejection is improper because no proper combination

of GB '784 and DE '738 discloses or suggests: inter alia, that, when the sealing ring is in an un-installed state, the deformable sealing elements are arranged on and project from a radially inwardly pointing surface of each annular limb so as to extend over a circumference of the annular limb, as recited in independent claim 13.

Appellant acknowledges that the figure of GB '784 shows a tire 4 and a sealing ring 5 having annular limbs 7 with grooves 8. Appellant submits, however, that GB '784 only shows what the ring 5 looks like in an installed state and with the tire under pressure. Thus, it is not apparent that GB '784 teaches or suggests the recited deformable sealing elements, much less, that, when the sealing ring is in an un-installed state, the deformable sealing elements are arranged on and project from a radially inwardly pointing surface of each annular limb so as to extend over a circumference of the annular limb, as recited in claim 13.

Appellant notes, for example, that the radially inwardly pointing surface of each annular limb 7 is just as likely to be defined by the free ends of the limb portions arranged between the grooves 8 so as to preclude them from projecting from this surface as is shown in, e.g., Fig. 2 of Appellant's application.

DE '738 does not cure the deficiencies of GB '784. While Appellant acknowledges that DE '738 teaches a sealing member 4 which apparently utilizes deformable members, it is not apparent that one having ordinary skill in the art would substitute of the grooves 8 of the member shown in GB '784 with the deformable members of member 4 of DE '738. Appellant notes that the member 4 in DE '738 applies an essentially axial force to axial annular surfaces of the beads 2 of the tire whereas the grooves 8 of member 5 in GB '784 apply an essentially radially inwardly directed force

to an essentially circumferential outer surface (albeit tapered) above the bead 3.

This distinction is not without a difference. Whereas the grooves 8 of GB '784 press against a portion of the tire along a generally radial direction whose force vector intersects an outer circumferential portion of the rim 1, the so-called deformable members of the member 4 in DE '738 press against a portion of the tire along an axial direction whose force vector does not intersect an outer circumferential portion of the rim.

Furthermore, it is submitted that the asserted combination/modification appears improper because the so-called deformable members of member 4 of DE '738 are oriented axially to bias the tire beads axially outwardly to seat the beads in the rim whereas the grooves on member 5 of GB '784 point down towards the inner surface of the tire above the beads and appear to play no role in biasing the tire beads axially outwardly to seat the beads in the rim. Instead, in GB '784, it appears to be the center portion 5a (not the wings 7) which biases the tire beads axially outwardly to seat the beads in the rim.

Finally, it is noted that none of the applied documents even remotely disclose or suggest that the deformable sealing elements are arranged on and project from a radially inwardly pointing surface of each annular limb. Again, the sealing member 5 shown in GB '784 shows grooves 8 arranged in the wings 7, but nothing projecting from a radially inwardly pointing surface of each annular limb. Similarly, the sealing member 4 shown in DE '738 shows projections arranged in axial end surfaces, but not on any wings, and these projections clearly do not project from a radially inwardly pointing surface of each annular limb.

For the foregoing reasons and because these documents fail to disclose or suggest the above-



noted features of the instant invention, Appellant submits that no proper combination of these documents discloses or suggest each and every recited feature of claim 13. Accordingly, Appellant submits that the Examiner has failed to provide an adequate evidentiary basis to support a rejection of obviousness under 35 U.S.C. § 103(a) and that the instant rejection is improper.

Thus, Appellant submits that GB '784 and DE '738 fails to disclose or suggest the features recited in at least independent claim 13.

**REJECTION OF DEPENDENT CLAIM 14 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 14 under 35 U.S.C. § 103(a) as unpatentable over GB '784 in view of DE '738 is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

In the rejection, the Examiner apparently believes that the combined teachings of GB '784 and DE '738 teach or suggest the features of claim 14. Appellant respectfully traverses this rejection.

Claim 14 depends from claim 13, and further recites:

the deformable sealing elements are configured radially outside the central annular body and project by a same amount from the radially inwardly pointing surface of the annular limb.

Appellant submits that, as neither document teaches or suggests the features of claim 14, no proper combination of these documents under 35 U.S.C. § 103(a) can render obvious the combination of features recited in claim 14.

It is noted that because GB '784 does not show what the grooves 8 and projections of the annular limbs 7 look like when the sealing ring 5 is in an uninstalled state, the Examiner has not set

forth a *prima facie* case of unpatentability regarding GB '784 teaching or suggesting the features of claim 14.

Furthermore, while it is arguable that DE '738 teaches sealing elements which project by similar or the same amounts, the sealing elements are oriented essentially in an axial direction and not arranged on the recited radially inwardly pointing surface which claim 13 defines as extending over a circumference of the annular limb.

Thus, Appellant submits that claim 14 is separately patentable over GB '784 and DE '738 as no proper combination of these documents discloses or suggests the features recited in at least dependent claim 14.

**REJECTION OF DEPENDENT CLAIM 15 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 15 under 35 U.S.C. § 103(a) as unpatentable over GB '784 in view of DE '738 is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

In the rejection, the Examiner apparently believes that the combined teachings of GB '784 and DE '738 teach or suggest the features of claim 15. Appellant respectfully traverses this rejection.

Claim 15 depends from claim 13, and further recites:

the deformable sealing elements are sealing lips having rounded free ends.

Appellant submits that neither document teaches or suggests the features of claim 15.

It is noted that because GB '784 does not show what the grooves 8 and sealing projections of the annular limbs 7 look like when the sealing ring 5 is in an uninstalled state, the Examiner has not

set forth a *prima facie* case of unpatentability regarding GB '784 teaching or suggesting the features of claim 15.

Furthermore, while it is arguable that DE '738 teaches sealing elements which project from a surface, the sealing elements appear to be tapered and to have flat ends. The ends of the sealing projections do not appear to be round.

Thus, Appellant submits that claim 15 is separately patentable over GB '784 and DE '738 as no proper combination of these documents discloses or suggests the features recited in at least dependent claim 15.

**REJECTION OF DEPENDENT CLAIM 16 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 16 under 35 U.S.C. § 103(a) as unpatentable over GB '784 in view of DE '738 is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

In the rejection, the Examiner apparently believes that the combined teachings of GB '784 and DE '738 teach or suggest the features of claim 16. Appellant respectfully traverses this rejection.

Claim 16 depends from claim 13, and further recites:

the sealing elements are a plurality of sealing lips distributed in a radial direction and oriented in the circumferential direction.

Appellant submits that neither document teaches or suggests the features of claim 16.

It is noted that because GB '784 does not show what the grooves 8 and sealing projections of the annular limbs 7 look like when the sealing ring 5 is in an uninstalled state, the Examiner has not set forth a *prima facie* case of unpatentability regarding GB '784 teaching or suggesting the features  
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of claim 16.

Furthermore, while it is arguable that DE '738 teaches sealing elements which project from a surface, the sealing elements are not oriented circumferentially and in a generally radial direction and. Instead, they are oriented circumferentially and in a generally axial direction.

Thus, Appellant submits that claim 16 is separately patentable over GB '784 and DE '738 as no proper combination of these documents discloses or suggests the features recited in at least dependent claim 16.

**REJECTION OF DEPENDENT CLAIM 22 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 22 under 35 U.S.C. § 103(a) as unpatentable over GB '784 in view of DE '738 is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

In the rejection, the Examiner apparently believes that the combined teachings of GB '784 and DE '738 teach or suggest the features of claim 22. Appellant respectfully traverses this rejection.

Claim 22 depends from claim 13, and further recites:

an axial spacing between axial outer sides of the annular limbs in a first radial position which corresponds to a radial position of radially inner ends of the annular limbs is smaller than an axial bead spacing ( $t_1$ ) of the tire beads in a mounted operating state on the rim in the first radial position, an axial spacing between the axial outer sides of the annular limbs in a second radial position which corresponds to a radial position of the radially outer ends of the annular limbs is greater than an axial bead spacing ( $t_2$ ) of the tire beads in the mounted operating state on the rim in the second radial position, and an axial spacing between the axial outer sides of the annular limbs in a region of the sealing elements is greater than an axial bead spacing ( $t_1$ ) of the tire beads in the mounted operating state on the rim in the first radial position.

Appellant notes that, e.g., Fig. 4 shows the recited axial spacings and submits that neither document teaches or suggests the features of claim 22.

It is noted that GB '784 arranged section 5a so as to contact each bead 3. As such, GB '784 does not teach or suggest, among other things, an axial spacing between axial outer sides of the annular limbs in a first radial position which corresponds to a radial position of radially inner ends of the annular limbs is smaller than an axial bead spacing ( $t_1$ ) of the tire beads in a mounted operating state on the rim.

Furthermore, DE '738 similarly teaches to contact the beads with member 4. As such, DE '738 does not teach or suggest, among other things, an axial spacing between axial outer sides of the annular limbs in a first radial position which corresponds to a radial position of radially inner ends of the annular limbs is smaller than an axial bead spacing ( $t_1$ ) of the tire beads in a mounted operating state on the rim.

Thus, Appellant submits that claim 22 is separately patentable over GB '784 and DE '738 as no proper combination of these documents discloses or suggests the features recited in at least dependent claim 22.

**REJECTION OF DEPENDENT CLAIMS 17, 23 AND 26 UNDER 35 U.S.C. § 103 IS IN ERROR**

Claims 17, 23 and 26 respectfully depend from independent claim 13 (or other claims which depend from claim 13), and are believed to be allowable based at least on their dependence to this independent claim.

**The Rejection of claims 18, 19, 21 and 24 under 35 U.S.C. § 103(a) as being unpatentable over GB 787,784 (GB '784) in view of DE 1,021,738 (DE '738), and further in view of US Patent No. 7,104,300 to VEUX et al.**

**REJECTION OF DEPENDENT CLAIMS 18, 19, 21 AND 24 UNDER 35 U.S.C. § 103 IS IN ERROR**

Claims 18, 19, 21 and 24 respectfully depend from independent claim 13 (or other claims which depend from claim 13), and are believed to be allowable based at least on their dependence to this independent claim.

**The Rejection of claim 20 under 35 U.S.C. § 103(a) as being unpatentable over GB 787,784 (GB '784) in view of DE 1,021,738 (DE '738), and US Patent No. 7,104,300 to VEUX et al., and further in view of US Patent No. 1,621,021 to MEDYNSKI.**

**REJECTION OF DEPENDENT CLAIM 20 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 20 under 35 U.S.C. § 103(a) as unpatentable over GB '784 in view of DE '738 and VEUX, and further in view of US Patent No. 1,621,021 to MEDYNSKI is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

In the rejection, the Examiner apparently believes that the combined teachings of GB '784, DE '738, VEUX and MEDYNSKI teach or suggest the features of claim 20. Appellant respectfully traverses this rejection.

Claim 20 depends from claims 19, 18 and 13, and further recites:

a hollow space formed at least in one radial elevation.

Appellant notes that, e.g., Fig. 12 of the instant application shows a hollow space 38 arranged in a radial elevation 37 and submits that none of the applied documents teaches or suggests this feature.

It is noted that the Examiner acknowledges that GB '784, DE '738 and VEUX lacks this feature.

Furthermore, while it is true that MEDYNSKI teaches a hollow space, the hollow space in MEDYNSKI is arranged in a center portion of sealing element 12 and not in a radial elevation of the member 12. It is noted that the rounded radial elevation above the hollow space of member 12 in Fig. 1 has no hollow space arranged therein. This is unlike the invention which utilizes a radial elevation 37 that has a hollow space 38 arranged therein (see Fig. 12 of Appellant's specification).

Thus, Appellant submits that claim 20 is separately patentable over GB '784, DE '738, VEUX and MEDYNSKI as no proper combination of these documents discloses or suggests the features recited in at least dependent claim 20.

#### **(IX) CONCLUSION**

Each of claims 13-37 are patentable under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph. Each of claims 13-24 and 26 are patentable under U.S.C. § 103(a). Specifically, each pending claim is not indefinite and the applied art of record fails to disclose the unique combination of features recited in Appellant's claims 13-24 and 26. Accordingly, the Board should reverse the decision of the Examiner to reject claims 13-37, and remand the application to the Examiner for withdrawal of the above-noted rejections. Authorization is hereby given to refund excess payments and charge any additional fee necessary to have this paper entered to Deposit Account No. 19-0089.

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Attachments: Claims Appendix, Evidence Appendix, and Related Proceedings Appendix  
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VIII CLAIMS ON APPEAL

13. A sealing ring for a vehicle wheel having a tubeless pneumatic tire with two tire beads formed on a radially inner side and by which the tubeless pneumatic tire is mounted on a radial outer side of a multiple part rim, comprising:

the sealing ring sealing the pneumatic tire radially inward toward the rim and arranged on the radial outer side of the rim, extending over a circumference of the rim in a circumferential direction and extending between the two tire beads of the pneumatic tire in the axial direction;

the sealing ring being configured with a central annular body comprising a cylindrical inner face for seating on a rim outer face and configured with a concentric flexible annular limb on both axial sides of the central annular body, each annular limb extending obliquely radially outward in an axial direction from the central annular body; and

deformable sealing elements formed at an end of the annular limb which points away from the central annular body,

wherein, when the sealing ring is in an un-installed state, the deformable sealing elements are arranged on and project from a radially inwardly pointing surface of each annular limb so as to extend over a circumference of the annular limb.

14. The sealing ring as claimed in claim 13, wherein the deformable sealing elements are configured radially outside the central annular body and project by a same amount from the radially inwardly pointing surface of the annular limb.



15. The sealing ring as claimed in claim 13, wherein the deformable sealing elements are sealing lips having rounded free ends.

16. The sealing ring as claimed in claim 13, wherein the sealing elements are a plurality of sealing lips distributed in a radial direction and oriented in the circumferential direction.

17. The sealing ring as claimed in claim 16, wherein the sealing lips extend away from the annular limb substantially perpendicularly with respect to a surface of the annular limb.

18. The sealing ring as claimed in claim 13, further comprising a reinforcing member structured to reinforce an annular body formed on the central annular body between the annular limbs.

19. The sealing ring as claimed in claim 18, wherein the reinforcement member is one or more radial elevations configured on the radial outer side of the annular body.

20. The sealing ring as claimed in claim 19, further comprising a hollow space formed at least in one radial elevation.

21. The sealing ring as claimed in claim 18, further comprising a reinforcing rib oriented in the circumferential direction.

22. The sealing ring as claimed in claim 13, wherein an axial spacing between axial outer sides of the annular limbs in a first radial position which corresponds to a radial position of radially inner ends of the annular limbs is smaller than an axial bead spacing ( $t_1$ ) of the tire beads in a mounted operating state on the rim in the first radial position, an axial spacing between the axial outer sides of the annular limbs in a second radial position which corresponds to a radial position of the radially outer ends of the annular limbs is greater than an axial bead spacing ( $t_2$ ) of the tire beads in the mounted operating state on the rim in the second radial position, and an axial spacing between the axial outer sides of the annular limbs in a region of the sealing elements is greater than an axial bead spacing ( $t_1$ ) of the tire beads in the mounted operating state on the rim in the first radial position.

23. The sealing ring as claimed in claim 22, wherein the axial spacing between the axial outer sides of the annular limbs in a region at least of the radially outer sealing elements which are configured on the annular limbs is greater than a respective axial bead spacing of the tire beads in the mounted operating state on the rim in the radial position.

24. The sealing ring as claimed in claim 21, wherein the difference of the axial spacing between the axial outer sides of the two limbs minus the axial bead spacing of the tire beads in the mounted operating state in the respectively assigned radial position decreases in the radial direction from one sealing element to the next sealing element.

25. The sealing ring as claimed in claim 15, wherein the deformable sealing elements are sealing lips oriented in the circumferential direction such that in the un-installed state, free ends of the deformable sealing elements define different diameters.

26. The sealing ring as claimed in claim 16, wherein the sealing elements are three to six sealing lips extending over the entire circumference of the sealing ring.

27. The sealing ring as claimed in claim 21, wherein the reinforcing rib extends over the entire circumference of the annular body and configured on the radial outer side of the central annular body between the annular limbs.

28. The sealing ring as claimed in claim 24, wherein the axial spacing between the axial outer sides of the annular limbs in the region of all the sealing elements which are configured on the annular limbs is greater than a respective axial bead spacing of the tire beads in the mounted operating state on the rim in the radial position.

29. The sealing ring as claimed in claim 13, wherein the deformable sealing elements are separated by grooves whose bottoms define different diameters and comprise sealing lips having rounded free ends which define different diameters.

30. A sealing ring for a vehicle wheel having a tubeless pneumatic tire with two tire beads formed on its radially inner side and by which the tubeless pneumatic tire is mounted on a radial outer side of a multiple part rim, the sealing ring, in an un-installed state, comprising:

a central annular body comprising a cylindrical inner face for seating on a rim outer face;

a first flexible member arranged on a first side of the central annular body, the first flexible member having an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring is installed on the vehicle wheel;

first deformable sealing elements formed on the first flexible member and projecting from the inner surface toward the rim outer surface when the sealing ring is installed on the vehicle wheel;

a second flexible member arranged on a second side of the central annular body, the second flexible member having an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring is installed on the vehicle wheel;

second deformable sealing elements formed on the second flexible member and projecting from the inner surface toward the rim outer surface when the sealing ring is installed on the vehicle wheel,

wherein free ends of the first deformable sealing elements define different diameters on the first side and free ends of the second deformable sealing elements define different diameters on the second side.

31. The sealing ring as claimed in claim 30, wherein the first and second deformable sealing elements are separated by grooves whose bottoms define different diameters on each of the first and

second sides.

32. The sealing ring as claimed in claim 31, wherein the free ends of the first and second deformable sealing elements are rounded.

33. The sealing ring as claimed in claim 32, wherein the bottoms of the grooves are rounded.

34. The sealing ring as claimed in claim 30, wherein the free ends of the first and second deformable sealing elements are rounded.

35. The sealing ring as claimed in claim 30, wherein a circumferential thickness of the first flexible member is greater at a free end area thereof than at a portion of the first flexible member arranged adjacent the central annular body and wherein a circumferential thickness of the second flexible member is greater at a free end area thereof than at a portion of the second flexible member arranged adjacent the central annular body.

36. The sealing ring as claimed in claim 30, wherein a circumferential thickness of the first flexible member is greater in a portion of the first flexible member having the first deformable sealing elements than at a portion of the first flexible member arranged adjacent the central annular body and wherein a circumferential thickness of the second flexible member is greater in a portion of the second flexible member having the second deformable sealing elements than at a portion of the

second flexible member arranged adjacent the central annular body.

37. A sealing ring for a vehicle wheel having a tubeless pneumatic tire with two tire beads formed on its radially inner side and by which the tubeless pneumatic tire is mounted on a radial outer side of a multiple part rim, the sealing ring, in an un-installed state, comprising:

a central annular body comprising a cylindrical inner face for seating on a rim outer face;

a first flexible member arranged on a first side of the central annular body, the first flexible member having an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring is installed on the vehicle wheel;

first deformable sealing elements formed on the first flexible member and projecting from the inner surface toward the rim outer surface when the sealing ring is installed on the vehicle wheel;

a second flexible member arranged on a second side of the central annular body, the second flexible member having an inner surface which extends to the cylindrical inner face and which faces the rim outer surface when the sealing ring is installed on the vehicle wheel;

second deformable sealing elements formed on the second flexible member and projecting from the inner surface toward the rim outer surface when the sealing ring is installed on the vehicle wheel,

wherein a circumferential thickness of the first flexible member is greater in a portion of the first flexible member having the first deformable sealing elements than at a portion of the first flexible member arranged adjacent the central annular body,

wherein a circumferential thickness of the second flexible member is greater in a portion of

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the second flexible member having the second deformable sealing elements than at a portion of the second flexible member arranged adjacent the central annular body,

wherein free ends of the first deformable sealing elements define different diameters on the first side and free ends of the second deformable sealing elements define different diameters on the second side, and

wherein the first and second deformable sealing elements are separated by grooves whose bottoms define different diameters on each of the first and second sides.

IX EVIDENCE APPENDIX

This section lists evidence submitted pursuant to 35 C.F.R. §§1.130, 1.131, or 1.132, or any other evidence entered by the Examiner and relied upon by Appellant in this appeal, and provides for each piece of evidence a brief statement setting forth where in the record that evidence was entered by the Examiner. Copies of each piece of evidence are provided as required by 35 C.F.R. §41.37(c)(ix).

NO.	EVIDENCE	BRIEF STATEMENT SETTING FORTH WHERE IN THE RECORD THE EVIDENCE WAS ENTERED BY THE EXAMINER
1	N/A	N/A



X RELATED PROCEEDINGS APPENDIX

Pursuant to 35 C.F.R. §41.37(c)(x), copies of the following decisions rendered by a court of the Board in any proceeding identified above under 35 C.F.R. §41.37(c)(1)(ii) are enclosed herewith.

NO.	TYPE OF PROCEEDING	REFERENCE NO.	DATE
1	N/A	N/A	N/A